

10/820,579

Remarks/arguments:

In response to the office action of September 19, 2005, the claims of the application have been amended to more clearly set forth applicants invention, and also to more clearly set forth what is new and novel in this application which was not set forth in applicants' earlier application which the examiner relies upon in his rejection.

Initially, the examiner has rejected various claims as failing to comply with 35 U.S.C. §112. Thus, the examiner rejected claims 7 and 15 because it was unclear how the camera was operated manually and automatically. The objected phrase has been amended to specify that the camera is operated either manually or automatically. The examiner has also rejected claims 11, 13, 14, and 16 for the inclusion of the indefinite term "preferably". In response to this rejection the term "preferably" has been deleted. In view of these changes, the examiner is respectfully requested to withdraw the rejection of claims 11, 13, 14, and 16 based on 35 U.S.C. §112.

The examiner has next rejected all claims, with the exception of claims 10 and 17, as anticipated by US 2003/0148243 [now US 6,964,567], obvious over US 2003/0148243, or unpatentable over US 2003/0148243 in combination with either US 4,268,154 or US 2002/0148243 (hereinafter Matos). Applicants' earlier US 2003/0148243 teaches an intraoral camera, which the examiner relies upon for its teaching of using light diodes or laser diodes which collectively form a light source. The most relevant portion of the corresponding patent states:

"As shown in FIG. 3, an arrangement for receipt and production of the light is preferably comprised of eight light diodes or laser diodes 40, which collectively form a light source 42 that is arranged preferably in an annular manner around a reflected light receipt element 44. The light source 42 and the reflected light receipt element 44 are mounted on a base unit 46 in a fixed relative position to each other. By means of the annular arrangement of the light diodes 40, a shadow-free illumination of the area to be evaluated is possible.

"It is to be understood that the light source can be configured in any desired suitable manner. For example, diodes producing lights of three colors can be used, such as green, blue, and red light diodes distributed in a uniform manner around the receiving elements of the light receipt element 44 in order to emit a white light.

"The light receipt element 44 preferably includes a CCD element for acquiring an image based on the reflected light that it receives. Electronics in the housing 50 control the light source 42, as well as the CCD and operation of the display 18 and of an image storage medium, which is preferably contained within the housing.

"It is also possible to use white light diodes or other different suitable light sources. A small tube or conduit 48 extends around the reflected light receipt element 44 and extends in a forward manner to the coupling 14, past the diodes 40 of the light source, and the coupling member and walls surrounding the light source and light receipt elements are preferably configured for substantially preventing light from reaching the receipt element that has not been reflected off the user's mouth. In this manner, a false lighting of the reflected light receipt element by the non-reflected light directly from the light source 42 is substantially eliminated."

In order to clearly distinguish from this reference, claims 1 and 12 have been amended to set forth a **pinpoint** light source. Clearly this is not taught in US 2003/0148243.

In the cited reference US 2003/0148243, only a light source for illuminating the desired tooth or teeth with a shadow-free light, such as light emitting diodes or laser diodes, is mentioned. However, the light produced by the mentioned light sources is not capable of producing a small and sharp bordered light point needed for judging if the intra-oral camera of this invention is aimed and/or focused correctly. It should be noted that laser diodes are capable of producing light either with a very narrow beam or a with wider beam. In applicants' earlier design the laser diodes used have a wider angle of emitted light beam in order to produce the desired even and shadow free illumination of the teeth. This is not the same as the diodes needed for the present invention which produce a pinpoint light which will coincided with the optical axis of the camera for alignment purposes. In US 2003/0148243 the mouth piece ensures correct positioning and the correct distance of the dental camera from the teeth for taking the desired picture. Therefore, no pinpoint light source for alignment purposes is needed.

The prior art US 2003/0148243 simply it is incapable of use for taking pictures of molars due to their position in the oral cavity and the relatively small mouth opening of the patient. The present invention in contrast is capable of providing high quality pictures even of molars because the intra-oral camera is not limited to only produce sharp pictures when taking them from a rectangular direction of view, but any position is possible due to the laser positioning as set forth in independent claims 1 and 12.

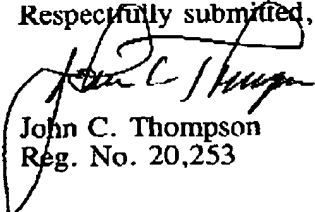
The examiner in his rejection of claim 3 states that the 2003/0148243 "teaches that the camera forms a light point with the light source." It is not clear what the examiner means by a "light point", but clearly there is nothing in 2003/0148243 which teaches --a pinpoint light source--. The examiner also states that "Matos teaches that pinpoint light sources such as laser diodes can be used as a light source for a camera." Applicant can find

no such teaching in Matos. If the examiner again relies upon Matos, he is respectfully requested to identify by line and column the basis for the above quoted statement.

In conclusion, it should be noted that the subject matter of the claims as amended clearly would not have been obvious from the references cited and applied by the examiner. Accordingly, the examiner is respectfully requested to allow this application in the absence of more relevant prior art.

Accompanying this response is a supplemental information disclosure statement and the appropriate fee for a late submission.

Respectfully submitted,


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following
Supplemental information disclosure statement
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